viable numbers to avoid listing under the ESA, suitable non-occupied habitat must be available. CBM could preclude such restoration." The BLM response indicated that the comment was correct. This is despite the fact that the black-tailed prairie dog was found to warrant listing under the Endangered Species Act (ESA) but was precluded by other priorities; it still remains a candidate for listing (3-107; U.S. Fish and Wildlife Service 2000).

7. The prairie dog is a keystone, or highly interactive, species, and thus is an ecological driver of the grasslands ecosystem. Keystone status is acknowledged in the report in the Biological Assessment by Rau (2002) found in the Appendix on Wildlife (4.2.2.1). As such, the prairie dog accounts for a great deal of the diversity, structure, and function found on the short- and mid-grass prairies. When prairie dogs decline, the ecosystem degrades and simplifies. The report notes other species of concern that depend on prairie dogs for survival (3-103; 3-107 and 108; 4-174) and the high number of associated species that depend on prairie dogs at some level (3-103; 4-174). The report also notes that "impacts on all wildlife will be widespread" (5-94).

8. Grasslands inhabited by prairie dogs provide a greater mosaic of vegetation structure, an abundance of prey for predators, burrow systems, and altered ecological processes (increased higher nitrogen content, succulence, productivity of plants, and macroporosity of soils) than uninhabited grasslands. Such changes enrich patterns of species diversity for prairie plants and animals (Coppock et al. 1983; Ingham and Detling 1984; O'Meilia et al. 1984; Krueger 1986; Detling and Whicker 1988; Whicker and Detling 1988; 1993; Munn 1993; Outwater 1996; Detling 1998; Jones 1998). For example, black-footed ferrets, burrowing owls (*Athene cunnicularia*) mountain plovers, ferruginous hawks (*Buteo regalis*), and forbs profit from prairie dog activities (Whicker and Detling 1993; Kotlier et al. 1999). The matrix of different habitats

found on and off-prairie dog colonies allows more species to exist and improves overall diversity of life across a landscape (increased *Beta* diversity).

9. The keystone concept means that impacts to prairie dogs can ripple through the broader biological community due to a loss of species interaction. Importantly, the effective extinction of species interactions occurs well before the species themselves have disappeared given that taxonomic representation, even if demographically viable, does not insure ecological function (Miller et al. 2000; Soulé et al. 2003). When the ecological function no longer exists, the ecosystem simplifies and degrades. Thus, minimalistic management goals that rely on the mere physical persistence of an interactive species, such as the prairie dog, is itself contributing to degraded ecosystems and to increased jeopardy for non-target species (Soulé et al. 2003). As an example, 762 prairie dogs may be required to support each female black-footed ferret and her offspring (Biggins et al. 1993).

10. The ROD to amend the Powder River and Billings Resource Management Plans is inadequate, reflecting a "cookie cutter" approach that shows little grasp of ecological interactions and function. The EIS does not provide adequate baseline data or adequate analysis. Using this ROD to develop oil and gas resources will promote unnecessary and excessive degradation of black-tailed prairie dogs, a Candidate Species for federal protection under the ESA, as well as degrade populations of associated species that depend on prairie dogs for survival. Given the level of proposed development, this leads to the inescapable conclusion that CBM development, as proposed, could act as a significant contributor to the need to protect both black-tailed prairie dogs and various associated species under the ESA.

11. As CBM development eliminates prairie dogs and their habitat from an area, even temporarily, this will increase fragmentation and increase the probability of extinction for associated species due to stochastic and deterministic events. This is especially so when combined with other activities that adversely impact prairie dogs. For small mammals, dispersal distances are typically short, and they don't have maps to navigate to other patches of habitat that we leave them. The Biological Assessment (Rau 2002) found in the Wildlife Appendix to the EIS admits that prairie dogs have low dispersal rates and can not move long distances to repopulate former habitat once they are extirpated from it.

12. After reviewing the EIS, it is apparent that the BLM did not adequately address landscape level processes. Mitigating the inevitable degradation caused by CBM development will require a scientifically rigorous understanding of the landscape's complex drivers. Unfortunately, the EIS fails to actually assess that importance in looking at the impacts to prairie dogs. The EIS does not grasp how prairie dogs contribute to, and regulate, an ecosystem at the landscape scale.

13. While the EIS recognizes the keystone function of prairie dogs, it does not consider levels of abundance, spatial/temporal scales, and context necessary to preserve the ecological role of prairie dogs as a keystone species. There needs to be more consideration of the consequences to diversity from maintaining small size and level of fragmentation for prairie dog colonies. These consequences are indirect, yet strong. The EIS fails to address the interaction of anthropogenic and natural drivers and how that interaction affects prairie dogs and the ecosystem. In other words, the data do not constitute an actual analysis of biological impacts. Tables are not a substitute for actual analysis.

14. The ROD and EIS do not demonstrate an understanding of the prairie dog from either a biological or ecological perspective that is sufficient to inform land management. Impacts to prairie dogs need to take into account more than just the relative area of disturbed habitat. Given that habitat is potentially limiting, the EIS should have assessed the spatial pattern of habitat and habitat impacts. Without such an analysis, you cannot come to a scientifically credible conclusion concerning the magnitude of impacts felt by prairie dogs and associated species.

15. The EIS emphasizes reclamation of vegetative habitats as the primary objective (4-179), but it takes more than restoring vegetation to restore ecosystem function. In short, the presence of proper vegetation does not mean that prairie dogs will occupy it (especially given their poor dispersal ability, see Rau 2002). If reclamation does not restore function, what is the point? It is clear that changing function can have severe effects on structure and diversity. Thus, reclamation must be more than just cosmetic. There has been a great advance over the last two decades in understanding species and system interactions. This EIS displays very little knowledge of those advances in its strategies for restoration and mitigation.

16. Much of the likely degradation to prairie dogs could potentially be avoided if the agency revisited its analysis and adequately addressed the likely impacts to prairie dogs, considered management alternatives that protected landscape level ecological interactions and function, and adopted mandatory mitigation measures to be implemented at the site-specific level. At the end of the day, mitigating CBM development will require a scientifically rigorous understanding of its complex drivers.

17. Much of the protection given to prairie dogs is based on the protection given to black-footed ferrets. However, the EIS forwards the disingenuous position that because black-footed

ferrets do not exist in the area proposed for CBM development, then the species is unaffected. The present range of black-footed ferrets excludes the area precisely because they were extirpated in the wild. Historical skull and museum specimen records, however, indicate that black-footed ferrets once lived in the area (Anderson et al. 1986; Clark and Stromberg 1989). Black-footed ferret reintroduction will not succeed until prairie dog colonies with potential for black-footed ferrets are protected to the extent that they can resume their ecological function. The EIS fails to address this issue.

18. The EIS does not address the role this region can play in repairing the range-wide decline of prairie dogs, black-footed ferrets, and mountain plovers. Any local plan must be designed to fit into the regional context if land management agencies intend to protect existing diversity and reverse the ongoing loss of diversity.

19. In preparing this declaration, I relied upon my review of the EIS and my professional knowledge which is based, in part, on the following references, many of which I cited to above:

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I declare under the penalty of perjury that the foregoing is true and correct to the best of my knowledge. 28 U.S.C. § 1746.

Dated this ___ day of _____, 2004.

_____

Brian Miller

FAX

Fidelity Exploration & Production Company
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Sheridan, WY 82801
PH: 307-672-7111 Fax: 307-673-6850

Date: 9/2/05
Fax To: Ms. Bloom
From: Joseph Icenogle
Phone #:
Fax #

NUMBER OF PAGES INCLUDING COVER SHEET 5

If you do not receive all the pages of this fax or have questions please call Phone: 307-672-7111

COMMENTS

FIDELITY
Exploration & Production Company

VIA FACSIMILE
(406) 233-2921

September 2, 2005

Department of Interior
Bureau of Land Management
Attention: Mary Bloom
111 Garryowen Road
Miles City, MT 59301

Re: Supplemental EIS Scoping

Dear Ms. Bloom:

Fidelity Exploration & Production Company (Fidelity) greatly appreciates this opportunity to submit scoping comments to be considered for the preparation of the supplement to the Final Montana Statewide Oil and Gas Environmental Impact Statement (FEIS).

Fidelity concurs with BLM's Notice of Intent as published in the August 5, 2005, Federal Register that the "scope" of the Supplemental EIS (SEIS) should be limited to the analysis of a "phased development" alternative, cumulative effects analysis of the Tongue River Railroad, and a discussion on how private water well mitigation agreements will help alleviate the impacts of methane migration and groundwater drawdown.

The materials contained in the SEIS should be integrated into the FEIS to produce only one revised final environmental impact statement. The SEIS should only contain that information necessary for developing this one additional alternative. To the extent that other topics are addressed, in response to comments made by the United States District Court, those additions or revisions should be made to the appropriate sections of the FEIS. At the end of the process, BLM should have only one revised final environmental impact statement.

Below are Fidelity's detailed scoping comments addressing the issues identified in the above referenced Notice of Intent:

2585 Heartland Drive
Sheridan, WY 82801

Phone: 307.672.7111
Fax: 307.673.6850

Phased Development:

Fidelity believes that the BLM should develop one phased development alternative to be analyzed in the SEIS, equivalent in importance and depth of analysis to the other alternatives already considered in the original FEIS. Such an approach would also be the most consistent with the April 5, 2005, Order of the United States District Court, mandating that the BLM "prepare a SEIS that addresses a phased development alternative." (Emphasis added.) Detailed analysis of multiple types of phased development would be unduly burdensome, costly, unreasonably time-consuming, and wholly unnecessary for compliance with the National Environmental Policy Act and the Court's mandate.

In the arguments before the United States District Court, phased development has been defined in various terms: Numeric (limiting development to a specific number of wells drilled per year), Temporal (limiting development to a specific area for a certain period of time prior to another area being developed), and Spatial (limiting development to a defined geographic area being developed prior to another area being developed).

Fidelity believes that a Numeric approach to phase development is arbitrary and capricious and does not comply with sound management principles to prevent waste and protect correlative rights to the oil and gas resource.

Fidelity believes that the current permitting process of submitting a Plan of Development (POD) application to BLM leads to a combination of both Temporal and Spatial phased development. Based on mineral lease ownership and available geological data Fidelity defines a specific limited geographic area that it desires to develop within a defined period. This area defines the POD and is, in fact, a Spatial phase.

Once the POD area is defined, Fidelity begins collecting both wildlife and cultural resource data at least one year prior to submittal of the POD application. After the initial data is collected, proposed well and facility locations are adjusted to avoid sensitive areas. The revised initial facility layout is submitted to the surface owner for consultation. After the consultation process, the POD is submitted with applicable data (drilling and surface use plans, water management plan, wildlife monitoring and protection plan, noxious weed plan, reclamation plans, etc.) The BLM then reviews the POD, which may result in modifications or additions, to the POD. As the fluid minerals staff in the Miles City Field Office knows, this is a very laborious and time consuming

process. The time it takes for data gathering, POD preparation and regulatory analysis results in the Temporal phasing of a project.

Once the POD is approved, the project proponent is subject to several Timing Limitation Stipulations (TLS) either attached to the lease or addressed as a subsequent Condition of Approval. Fidelity has to plan its operations around several TLS in the Tongue River watershed. These include: Crucial Mule Deer Winter Range Habitat (Dec 1 – March 31), Sage Grouse Nesting (March 1 – June 15), and Raptor Nesting (March 1 – Aug 1). For planning purposes, our drilling and construction season is generally June 16 -- November 30.

This short discussion above does not include resource uncertainty and pipeline access necessary to market gas once it is found. The take-away capacity for natural gas from wells to market is limited in Southeastern Montana. Take-away capacity is dependent on resource and permitting certainty. Therefore, phased development is the practical reality when you view the cumulative permitting and compliance process, coupled with the resource and market conditions in Southeastern Montana.

Tongue River Railroad:

Fidelity understands that the United States District Court has suggested that the BLM include the Tongue River Railroad in its cumulative impacts analysis. The Tongue River Railroad has been proposed and discussed since the early 1970s, without any forward movement in permitting and construction. Fidelity believes that BLM should advise the public of the feasibility of the Tongue River Railroad ever coming to fruition.

Private Water Well Mitigation Agreements:

Private water well mitigation agreements are offered by statute and regulation to appropriated groundwater right holders within a minimum of one-mile from a producing CBNG well. The intent of the water well mitigation agreement is to protect the water right holder from any adverse impact they may encounter as a result of a CBNG well producing from the same aquifer. While Fidelity strongly supports the statute and offers private water well mitigation agreements, it cannot force an affected party to enter into one. Nonetheless, Fidelity recognizes that the United States District Court identified water well mitigation agreements as an area of concern, as to both (a) the substance of such agreements, and (b) their effectiveness in alleviating the impacts of CBNG development on methane migration and groundwater drawdown. As to the issue of groundwater drawdown, the Court's concerns are adequately addressed by the applicable statutes and common law remedies, which provide contractual and non-contractual legal remedies for persons adversely affected by groundwater drawdown.

Since the preparation of the FEIS significant groundwater monitoring data has been collected. The Montana Board of Oil and Gas Conservation (MBOGC), through Order 99-99, implemented the Powder River Basin Controlled Groundwater Area in 1999. The data collected pursuant to Order 99-99 is incorporated into annual groundwater monitoring reports prepared by individual CBNG operators. The Technical Advisory Committee created by the Montana Department of Natural Resources and Conservation, as part of the Powder River Basin Controlled Groundwater Areas designation, reviews pertinent groundwater data and develops annual reports for the Powder River Basin Controlled Groundwater Area. In addition, the Montana Bureau of Mines and Geology collects groundwater monitoring data for various clients related to both coal mining and CBNG development in the Powder River Basin. BLM should review and incorporate this data in the SEIS, where applicable.

In the final analysis, such agreements are best viewed as one potential tool for addressing potential groundwater impacts. The carefully crafted existing statutory and regulatory procedures and other existing legal remedies provide substantial incentives for CBNG operators to make every effort to enter into water well mitigation agreements, while recognizing surface owners' rights to decline to enter into such agreements.

In all candor, however, as to methane migration, Fidelity does not see the nexus referenced by the Court between water well mitigation agreements and amelioration of impacts of methane migration. Also, there is not any data that supports methane "migration" as a human health or safety issue in the CBNG development in the Powder River Basin. While, there have been reports of methane gas being found in various water wells and monitoring wells this may be related to the gradual pressure drawdown that the well had on the reservoir, thus releasing the methane. However, this phenomenon is not methane "migration." Fidelity strongly supports effective communication between landowners, monitoring well operators and CBNG operators to identify wells with methane and apply appropriate mitigation measures.

Again, Fidelity thanks the BLM for the opportunity to submit scoping comments related to the court ordered SEIS. Should you have any questions or comments concerning the foregoing, please feel free to give me a call at the letterhead number.

Sincerely,

FIDELITY EXPLORATION & PRODUCTION COMPANY

Joseph C. Icenogle
Regulatory/Public Affairs Manager

2507 Stower St.
Miles City, MT 59301
September 2, 2005

Mary Bloom, Planning Specialist
Miles City Field Office
Bureau of Land Management
111 Garryowen Road
Miles City, MT 59301

Dear Ms. Bloom:

Attached is my three page comment on the Supplemental Environmental Impact Statement for the 2003 Montana Statewide Oil & Gas EIS and the Powder River and Billings Resource Management Plans.

Please insure that my name and address is placed on the BLM list of interested parties and provide me with future mailings about this SEIS.

Thank you.

Very truly yours,

Gary W. Huckins

Gary W. Huckins

LAND AND WATER RESOURCES

At this point, "phased development" has not been defined; but there will likely be winners and losers. That is the nature of business for the energy companies. It should not be allowed to prevent sound planning.

If "phased development" means a measured approach - limiting development to smaller acreages over a longer time - there will be benefits.

Construction of well pads, access roads, power lines, compressor/gathering sites and pipelines will disturb existing vegetation. Wind and water erosion and weed infestation of the exposed soil will follow. Weed and erosion control on a smaller area that can be watched closely will likely have better results.

Drilling and development also entails heavy traffic; personal experience has shown that heavy traffic from events such as hunting season leave a huge pall of dust in the air during dry periods. This will be multiplied many times over by the large trucks used in drilling and production – large trucks create vast quantities of dust compared to smaller vehicles such as pickup trucks. Dust control on the unpaved roads will be easier if confined to a limited area. Air quality will be improved.

Water resources are critical in this arid region – potable water for residential use and agricultural water for the principal economic activity. Wildlife populations and recreational uses are preserved and enhanced by grazing livestock. They also represent a significant and growing contribution to the local economy. Energy development planning must incorporate mitigation measures that will insure continuation of agricultural and recreational use of the land in the affected area.

At this point only forecasts of the drilling/production and associated impacts exist. The projections necessarily require assumptions and "modeling" that may or may not be accurate.

"Phased development" would confine the impacts to a limited area, while providing actual knowledge of the outcome. If remedial action is required, the burden on all of the stakeholders is reduced. If technology or experience show that a different approach is preferable, development plans can be modified. In the long run, "hands on" experience can provide new and better options for sensible development.

The principal water issues that require mitigation are quantity and quality.

Montana's statutory limit of a one mile radius for loss of well water is arbitrary – a number that is untested and has no basis in fact for this area. As a practical matter, there are so many wells and springs that solving problems on a case-by-case basis is inefficient and impractical.

A better approach would be to form community water systems serving an area proposed for development. The systems could be cooperatives owned by the water system customers or under the auspices of county government as a water district. The water systems must be completed and available before drilling and de-watering of CBM wells commences to avoid interruption of domestic and livestock water supplies.

It is axiomatic that the cost of water systems be borne by the energy companies, especially in the case of state and federal leases that provide no revenue at all to the surface owner. Surface owners must not be forced to subsidize energy production by loss of use or added costs to replace vital water supplies.

Irrigators along Tongue River and Powder River will likely be left to the whims of the upstream state and the vagaries of nature for water supplies.

It is therefore vital to insure that produced water quality does not contribute to degradation of the river water. Management options should include a combination of beneficial use as highest priority, treatment before discharge as second priority, and reinjection of remaining untreated supplies. This approach would also afford some flexibility to the energy companies in planning development and managing production costs.

At this point the conventional wisdom is that water quality varies widely, so well testing should be required. There is enthusiasm for agricultural use in some cases. Landowners should have that option.

However, agricultural use is limited and seasonal. Livestock consumption falls far short of the vast quantities of produced water and even sprinkler irrigation falls short because it is seasonal while well production is constant. Beneficial use is desirable but only a partial solution to disposal of produced water. Therefore, treatment or reinjection of unused water would mitigate water quantity and quality problems.

"Phased development" would limit the effect of produced water and provide factual knowledge as a basis for planning additional development. We can only hope the acrimonious disputes over water quality and quantity would be amicably resolved without further recourse to the legal system.

SOCIOECONOMICS

It is exceedingly rare to hear such enthusiasm for taxation as that expressed by proponents of CBM development; including more than a few elected officials and other tax supported entities such as school districts.

The problem with that concept is the matter of timing. Infrastructure and government services are an immediate and constant financial commitment; revenue from taxation arrives later, and fluctuates significantly in the energy sector. In business jargon, the cash flow to meet the costs is not always available when the costs have to be paid.

This is a sparsely populated rural area with minimal government services (very minimal) because agriculture, the principal source of local income, is not very profitable. That is especially true at this point, in the wake of an extended drought that has caused significant loss of agricultural production.

Rural roads are narrow, winding, and unpaved. Adequate for the modest traffic levels with the current population. Roads and bridges are inadequate for constant truck and heavy equipment traffic generated by energy development; for example, as observed in Campbell County, Wyoming just across the state line. Add seasonal traffic for shipping agricultural products by truck, hunting season traffic, and/or adverse weather and the existing road system is dangerously inadequate. It is important to remember that most schools have consolidated and that students frequently ride school buses many miles over these rural roads every day.

Schools may be adequate for modest enrollment increases, but not a large influx of students. Thus, "phased development" might be accommodated more readily without the necessity of building added schools/classrooms.

Housing, and especially rental housing is in short supply in the affected area. In the short run, employees may elect to commute. "Phased development" would allow more time to construct rentals and single family dwellings for permanent residents employed by the energy companies.

PILT (Payment in Lieu of Taxes) contributions from the federal government are not adequate to meet the cost of government services and infrastructure. As a mitigation measure, energy companies undertaking high density CBM developments should be assessed impact fees to avoid burdening local taxpayers with the entire cost of infrastructure and government services.

NATIVE ACTION
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September 2, 2005

Mary Bloom
Project Manager
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Miles City, MT 59301

Re: SEIS/Amendment Comments

Dear Ms. Bloom,

This letter provides the comments of Native Action on the scope of the Supplemental Environmental Impact Statement and Resource Management Plan (RMP) Amendment (SEIS/Amendment) addressing coalbed methane development in the Billings and Powder River RMP Areas of Montana. We also provide comments on proposed planning criteria for the SEIS/Amendment.

As reflected in the August 5, 2005 Federal Register notice (70 Fed. Reg. 45417), the SEIS/Amendment is being pursued in accordance with an April 5, 2005, Order issued by the U.S. District Court in Northern Cheyenne Tribe v. Norton, No. CV 03-78-BLG-RWA, requiring BLM to consider a phased development alternative for CBM production in the Billings and Powder River RMP Areas of Montana. The April 5, 2005 Order followed a February 25, 2005 decision of the same court holding that the April 2003 Final Environmental Impact Statement (FEIS) and RMP Amendment was inadequate because it did not evaluate a phased development alternative.

As a preliminary comment, Native Action protests the adequacy of the public hearing conducted by the BLM at Lame Deer, Montana on August 23, 2005. Instead of allowing the public to state their concerns and comments on the scope of the Supplemental Environmental Impact Statement and Resource Management Plan (RMP) Amendment (SEIS/Amendment) addressing coalbed methane development in the Billings and Powder River RMP Areas of

Montana; the BLM limited public input to the verbalization of comments to BLM scribes on five (5) topics located at five separate locations in the meeting hall, which the BLM had pre-selected without any public input and without any advance notice. The time restriction and public hearing comment format, whereby people had to line up at each station (flip chart) in order to provide compartmentalized comments, oftentimes having to restate their comments in a nutshell or bullet point format in order to accommodate the BLM scribes' attempts to record the comments in handwritten form, and limited to each of the pre-selected topics, unreasonably and arbitrarily denied the general public a reasonable and adequate opportunity to comment in accordance with the remedy ordered by the district court.

The BLM's time and format restrictions did not allow the public an opportunity to comment on more than one or two of the above referenced pre-selected topics, let alone comment on any matter not included in the pre-selected topics. It was impossible for any person to comment on each of the pre-selected topics within the time allowed. No bilingual interpreters were provided, and primary Cheyenne language speakers were denied any opportunity to comment. Additionally, it is extremely difficult for Cheyenne people to compartmentalize their thinking and comments, on these issues, especially without prior notice. To the Cheyenne, these topics are necessarily interwoven…cultural and environmental concerns are not distinct and separate. Indeed, many of the attendees left the hearing in disgust or in protest as they were deprived of any meaningful opportunity to comment. In order to rectify this deficiency and to provide a meaningful public hearing, we hereby request that another public hearing be scheduled in Lame Deer, Montana, utilizing bilingual interpreters and a public hearing format whereby people may state their comments directly into the record.

I. BLM's Trust Responsibility to the Tribe.

BLM, like all federal agencies, is subject to the federal trust responsibility. Seminole Nation v. United States, 316 U.S. 286, 296-97 (1942); Nance v. Environmental Protection Agency, 645 F.2d 701, 711 (9th Cir.), cert. denied, 454 U.S. 1081 (1981); Northern Cheyenne Tribe v. Hodel, 12 Ind. L. Rep. 3065, 3071 (D. Mont. 1985). "The law is 'well established that the Government in its dealings with Indian tribal property acts in a fiduciary capacity.'" Lincoln v. Vigil, 508 U.S. 182, 194 (1993) (quoting United States v. Cherokee Nation, 480 U.S. 700, 707 (1987)). Even where no formal trust has been established, a fiduciary relationship arises when the Government assumes elaborate control over property belonging to Indians. United States v. Mitchell, 463 U.S. 206, 225 (1983).

Because the Federal government exercises control over the mineral, air and water resources of the Northern Cheyenne Reservation, all of which are held in trust for the Tribe by the United States, it has an obligation to manage and protect these resources for the benefit of the Tribe and its members. In the 1926 Northern Cheyenne Allotment Act, Congress provided that the mineral resources on the Reservation were reserved for benefit of Tribe and may be leased by the Federal government with the Tribe's consent "under such rules and regulations as the Secretary of the Interior may prescribe." Northern Cheyenne Tribe v. Hollowbreast, 425 U.S. 649, 651 (1976). Likewise, Congress provided in the 1992 Northern Cheyenne Reserved Water

Rights Settlement Act that the Secretary of the Interior would "administer and enforce" the Tribe's reserved water rights pending the Tribe's adoption and the Secretary's approval of a Tribal water code. Pub. L. 102-374 (Sept. 30, 1992), § 5(a).

Where such close Federal control over Reservation resources exists, the government has a strict fiduciary obligation to protect these resources and manage them in the best interests of the Tribe and its members. Mitchell, 463 U.S. at 225; Cobell v. Norton, 240 F.3d 1081, 1100 (D.C. Cir. 2001). The government may not compromise its obligation to protect the water rights and mineral resources of the Northern Cheyenne Reservation when managing its own lands and resources. See, e.g., Parravanno v. Babbitt, 70 F.3d 539, 546 (9th Cir. 1995); Joint Board of Control v. United States, 832 F.2d 1127, 1132 (9th Cir. 1987); Pyramid Lake Paiute Tribe v. Morton, 354 F. Supp. 252, 256-57 (D.D.C. 1973). This is especially true in this case where the government seeks to benefit financially, in the form of bonuses, rents and royalties, from development of federally-owned CBM resources. United States v. Creek Nation, 295 U.S. 103, 110 (1935).

Even where off-Reservation energy development would not directly physically imperil and damage the Reservation's natural resources, the courts have held that the BLM has fiduciary obligations to consider and protect Tribal socioeconomic and cultural interests jeopardized by off-Reservation federal mineral development. In Northern Cheyenne Tribe v. Hodel, 12 Ind. L. Rep. 3065, 3071 (D. Mont. 1985), the Court held:

> [T]he special relationship historically existing between the United States and the Northern Cheyenne Tribe obligated the Secretary to consider carefully the potential impacts to the tribe resulting from the lease sale of federal coal tracts lying adjacent to or near the Northern Cheyenne Reservation. Ignoring the special needs of the tribe and treating the Northern Cheyenne like merely citizens of the affected area and reservation land like any other real estate in the decisional process leading to the sale of the Montana tracts violated this trust responsibility. Once a trust relationship is established, the Secretary is obligated, at the very least to investigate and consider the impacts of his action upon a potentially affected Indian tribe. If the result of this analysis forecasts deleterious impacts, the Secretary must consider and implement measures to mitigate these impacts if possible.

Id. at 3071.

Like off-Reservation coal development, full-scale CBM development surrounding the Reservation has the potential to result in serious cultural and socioeconomic impacts to the Tribe and its members. In addition, such development may damage the Reservation's mineral estate, air and groundwater resources, all held in trust for the Tribe. The development will also damage surface water resources and agricultural lands held in trust for the Tribe and its members. As a

fiduciary with an obligation to protect the Tribe's trust assets, the BLM must do more than merely reduce or seek arrangements for post hoc compensation for the damage to trust resources, it must prevent these impacts from occurring at all.

Because none of the full-field development alternatives analyzed in the 2003 FEIS fully protected Northern Cheyenne trust assets, the Tribe advocated consideration of a phased or restricted development alternative. In Northern Cheyenne Tribe v. Norton, No. CV 03-78-BLG-RWA (Feb. 25, 2005), the court upheld the Tribe's claim that BLM violated the National Environmental Policy Act by not studying such an alternative. The Court held that NEPA required BLM to consider a phased development alternative because it was both consistent with the agency's stated purpose and need and was feasible under the circumstances. Indeed, the Court concluded, a phased development alternative would not hinder the stated goal of "minimiz[ing] the environmental and societal impacts related to CBM activities" but in fact would further this objective. Feb. 25, 2005, Order at 12-14. In its April 5, 2005, order the Court required BLM to prepare an SEIS addressing phased development of CBM resources in the Powder River and Billings RMP areas.

The Tribe believes that the forthcoming SEIS which will be prepared pursuant to the Court's order, provides BLM with an opportunity to better fulfill its trust responsibilities to the Tribe. The Tribe wishes to work closely with BLM in designing alternatives that will serve to prevent adverse social, economic and environmental impacts both on and off the Reservation.

II. Phased Development Alternatives.

The Tribe has urged BLM to examine phased CBM development because regulation of the timing and location of CBM development is an important method of reducing the adverse cultural, socio-economic and environmental impacts of such development. Three types of phased development were briefly discussed in the 2003 FEIS:

> First, the number of rigs in the emphasis area could be controlled and leases would be developed in stages. Second, the companies would be allowed to develop production in one geographic area at a time and when complete, move to another. Lastly, corridors could be left undeveloped to allow for wildlife movement.

2003 FEIS at 2-4.

While there are many possible phased development alternatives that could be examined, all involve two types of restrictions: (1) restrictions on the rate or timing of development; and (2) restrictions on the location of development. Each of these types of restrictions should be carefully evaluated in developing a range of phased development alternatives for analysis in the SEIS.

A. Restrictions on the Rate of Development.

Restrictions on the rate of development would be imposed to reduce the regional or cumulative social, economic, cultural and environmental effects of CBM development. Examples of these cumulative or regional impacts would include the added burdens to Reservation services and infrastructure resulting from immigration to the region of CBM workers and their families; cumulative impacts to Reservation air quality resulting from the cumulative impact of many CBM wells and compressor stations, and the effects on water quality from direct discharge, land application sites, infiltration ponds, depletion or draw down of ground water resources and long term impacts to the aquifers underlying and near the Reservation.

The Tribe suggests that BLM evaluate the environmental impacts of restrictions on the rate of development under three scenarios – high, medium and low. Under the high development scenario, BLM would limit approval of CBM development to a total of 500 wells per year (federal, state and private). This is equal to the level of development provided for in the court's interim injunction and is more than twice the number of wells previously permitted in any year. Under the medium development scenario, BLM would limit approval to 350 wells per year, and under the low development scenario, 200 wells per year.

B. Restrictions on the Location of Development.

Restrictions on the location of development would be imposed to avoid or mitigate the impacts of CBM development that are associated with particular geographic areas. Examples of these impacts would include the effects on Reservation groundwater and methane reserves, impacts to critical wildlife habitat and migration corridors, and effects on important cultural resources.

The Tribe has previously proposed area restrictions designed to prevent impacts to Reservation groundwater and methane reserves. Under these restrictions a buffer zone would be established around the Reservation. Development within the buffer zone would only proceed after it could be shown through pump tests or other equivalent means that Reservation groundwater or methane reserves would not be affected. The Tribe originally proposed a buffer zone of 14 miles, which corresponds with the maximum extent of significant groundwater draw down based on two dimensional groundwater modeling. Subsequent three dimensional modeling suggests that significant impacts would be likely within at least four to five miles from a producing field, making this distance appropriate for a buffer zone around the reservation.

The SEIS should also evaluate restrictions on the location of CBM development to protect critical wildlife habitat, including but not limited to winter range and migration corridors for deer and elk. Studies should be undertaken to determine the precise location of these areas. Riparian ecosystems along the Tongue River, Rosebud Creek, Hanging Woman Creek and Otter

Creek have high value as wildlife habitat, and are also important ceremonial and medicinal plant gathering areas for the Tribe.

The SEIS should evaluate restrictions on the location of CBM development to avoid important Northern Cheyenne traditional cultural properties (TCPs), including the Rosebud Battlefield, the Wolf Mountains Battlefield, off-Reservation homestead sites, important hunting, burial sites, fishing and gathering areas, and culturally important springs. The Tribe requests confidential consultation under Section 106 of the National Historic Preservation Act over the location of TCPs where CBM development should be prohibited or restricted.

III. Evaluation of Environmental Effects.

Once a range of phased development alternatives is selected, BLM must evaluate the environmental effects of these alternatives. While the analysis in the 2003 FEIS provides a useful starting point for this analysis, the 2003 FEIS needs to be supplemented in several areas. Indeed, the agency's consideration of phased development alternatives so thoroughly implicates the entire FEIS – particularly the evaluation and comparison of the effects of each alternative – that the Tribe believes BLM's charge on remand from the district court is more appropriately a revision of the FEIS rather than a mere "supplement" to the document. See Feb. 25, 2005, Order at 33 (describing the remand process as a "completion of a new environmental impact statement that includes a phased development alternative").

A. Social, Economic and Cultural Effects.

In Northern Cheyenne Tribe v. Hodel, 12 Ind. L. Rep. at 3074, Judge Battin held that BLM violated the federal trust responsibility by selling coal leases in Montana without adequate consideration of the lease sale's cultural, social or economic effects on the Northern Cheyenne Tribe and the Reservation and the means necessary to mitigate such effects. A subsequent court-ordered SEIS, Economic, Social and Cultural Supplement to the Powder River I Regional EIS (June 1989), found that past energy development had caused adverse social, economic and cultural impacts on the Northern Cheyenne Reservation and that the proposed coal lease sale would result in additional severe cultural, social and economic impacts to the Tribe and the Reservation.

The Tribe remains concerned that full-field CBM development in the Powder River RMP area will lead to another "boom and bust" cycle similar to that which occurred during the 1970s coal boom. This will place added stress on the Tribe's ability to provide basic services to the Reservation community. The *hope* of obtaining employment in the CBM boom will draw Tribal members back to the Reservation, increasing demands for water, sewer and solid waste services, exacerbating an already severe housing crisis, adding to the crime and chemical abuse problems, and increasing the demand for Tribal social services. Increases in the numbers of non-Indians passing through the Reservation will place added burdens on already substandard and underfunded Reservation law enforcement, fire protection and emergency medical services. The presence of non-Indians enjoying the wealth and income created by CBM will add to the level of

social conflict, sense of deprivation and breakdown on the Reservation. Social and economic conditions on the Reservation will deteriorate as they did during the coal boom of the 1970s and early 1980s, while the rest of the region prospered. See Tribe's 2002 Narrative Report ("Narrative Report") at 3-9.

A major deficiency in the 2003 FEIS is the lack of detailed analysis of the social, economic and cultural effects of CBM development on the Reservation. The SEIS presents BLM with an excellent opportunity to rectify this substantial shortcoming.

The BLM's 1989 SEIS on the social, economic and cultural effects from off-Reservation coal development presents a good template for the type of analysis that BLM should conduct for CBM development. The 1989 SEIS contained a detailed baseline description of Reservation employment, population, income, fiscal conditions, government, housing/services/infrastructure, social organization, social well-being, and cultural conditions. It also provided a detailed, quantitative analysis of the impacts of the federal coal leasing program in regard to these nine areas. Finally, the 1989 SEIS evaluated a "wide array" of mitigation options for addressing these impacts. The forthcoming SEIS should conduct the same kind of analysis for CBM development.

The 1989 SEIS also analyzed the cumulative impacts of federal coal leasing by developing low and high baseline scenarios which assumed different levels of non-federal coal-related development. BLM's low baseline scenario assumed no new mining for private coal between 1990 and 2005 while BLM's high baseline scenario assumed the development of several new coal mines on private lands and construction of the Tongue River Railroad. 1989 SEIS, pp. 5-6. The forthcoming SEIS should take a similar approach and evaluate cumulative impacts from the high, medium and low CBM development scenarios described above. The SEIS should also look at the added cumulative environmental, social, economic and cultural effects on the Reservation from development of the Otter Creek coal mines by the State of Montana, the State's proposal to develop a coal liquifaction facility near Ashland, and (as directed by the district court) the Tongue River Railroad.

The forthcoming SEIS, like the 1989 SEIS, should also evaluate the distribution of economic benefits from coal development and the likelihood that such benefits would flow to the Reservation community in terms of employment, business activity and income. 1989 SEIS, pp. 13, 17. The SEIS should also evaluate the on- and off-Reservation population increases likely to result from CBM development under the high, medium and low development scenarios, and the burdens that such increases are likely to impose on already strained Reservation facilities, infrastructure and public services. The SEIS should also provide detailed, quantitative projections of the expenditures needed to bring Tribal facilities, infrastructure and services up to adequate levels, assuming different levels of CBM development. *See* 1989 SEIS pp. 18, 26-28, 103-06.

The SEIS should forecast the effect that off-Reservation CBM development will have on Tribal government revenues through taxes, royalties and other payments. The SEIS should also

evaluate the Tribe's ability to generate income from other sources to address the environmental social and economic burdens that will result from off-reservation CBM development and the political and social consequences to the Tribe if it is unable to meet increased demands for services.

The SEIS should include a detailed assessment of the effect of off-Reservation CBM development on the Tribe's social organization, social well-being and culture. *See* 1989 SEIS, pp. 111-14.

Finally, the SEIS should include a detailed discussion of measures that could mitigate the adverse environmental, social, economic and cultural effects of CBM development on the Reservation. In particular, the SEIS should evaluate the efficacy of a "wide array" of mitigation measures comparable to those discussed on pages 125-41 of the 1989 SEIS for coal development.

B. Air Quality.

In 1977, the Northern Cheyenne Tribe designated its airshed as Class I, the most pristine standard available under the Clean Air Act. This redesignation is indicative of the great value placed by the Northern Cheyenne on the crystalline air quality that normally exists on the Reservation. Air quality concerns arise from the numerous disturbances to the natural ground cover from well pad construction and unpaved roads. In addition, natural gas compressors will emit pollutants during operations. The 2003 FEIS found that full field CBM development could result in violations of the Reservation's Class I increments for PM_{10} and NOx. 2003 FEIS at 4-27.

The SEIS should examine whether restrictions on the number and location of wells, drill pads, roads and compressor stations would reduce the potential for such violations. Increment consumption forecasts should be made for the high, medium and low development scenarios discussed above.

The analysis of the potential for violations of the Reservation's Class I increments should be based on the methodology provided for by the Clean Air Act. In particular, the emissions inventory should include all sources permitted after the baseline dates, including the Colstrip #3 and #4 power plants. The FEIS included only those sources permitted after 1994. The emissions inventory and increment consumption analysis should be updated to reflect the emissions inventory and modeling work undertaken cooperatively by the Environmental Protection Agency (EPA), the Montana Department of Environmental Quality (MDEQ), and the Tribe under an MOA signed in 2004. In addition to updating the emissions inventory and modeling, the reasonably foreseeable development scenario should be expanded to include the proposed Otter Creek coal mines, the Tongue River Railroad, and a coal liquifaction facility proposed for the Ashland area.

C. Surface Water Quality.

The Northern Cheyenne Tribe has reserved rights to the waters of the Tongue River, Rosebud Creek and the Bighorn Reservoir. The Tongue River and Rosebud Creek are presently used by Tribal members to irrigate crops, including hay, alfalfa seed and corn. Although only about 1,794 acres of Reservation land are presently irrigated, as much as 10,000 acres of Reservation land along the Tongue River and Rosebud Creek are potentially irrigable if Reservation irrigation systems were fully funded and developed. Narrative Report at 6-34 to 6-35.

The Tribe's ability to put its reserved water rights to beneficial use for agricultural purposes could be severely compromised by discharges of untreated CBM production water into Rosebud Creek and the Tongue River. Assuming a SAR threshold of 2 (the limit provided for in the Tribe's surface water quality standards for the Tongue River and Rosebud Creek), very little, if any, CBM discharge can be accommodated. The Tribe is also concerned about the effects that discharges of CBM water will have on native riparian vegetation, soils, and aquatic life. The SEIS should examine whether restrictions on the number and location of wells would reduce the potential for violations of the Tribe's water quality standards, assuming that existing regulations and restrictions on the management of CBM water remain in place.

The Tribe believes that the analysis in the 2003 FEIS underestimated the potential for violations because it assumed that only direct discharges of CBM would raise the SAR and EC levels of the receiving waters. In reality, disposal of CBM water through land application disposal and surface water impoundments can have long-term adverse effects on the quality of receiving waters that needs to be accounted for when predicting the adverse effects of CBM development on surface water quality. The SEIS should evaluate the efficacy of surface water impoundments and land application disposal in protecting surface water quality and estimate the long-term effects on surface water quality if these methods are used.

D. Groundwater and Methane Migration.

The Tribe's 2002 Narrative Report highlights the importance of groundwater resources to the Tribe and its members. The Tribe has a reserved right, recognized in the congressionally-confirmed Northern Cheyenne Water Compact, to the alluvial groundwater underlying the Reservation. Narrative Report at 6-26. The Compact does not address the Tribe's right to use the Reservation's non-alluvial groundwater. Each of the five Reservation communities (Ashland, Birney, Lame Deer, Muddy Cluster and Busby) relies on groundwater withdrawals as the sole source of water for domestic, commercial, agricultural and municipal use. Id. at 6-37. Tribal ranchers also rely on wells for domestic use and stock watering. Id. at 3-36, 6-38.

It is likely that the Tribe's use of groundwater will increase in the future as the Tribe slowly upgrades the Reservation's inadequate water infrastructure to meet community needs. See Narrative Report at 5-7 - 5-10. In addition, the Tribe may choose to use the Reservation's groundwater resources to provide for future economic development, including the development of its valuable coal reserves. Id. at 6-40.

Groundwater is also important to the Tribe because it feeds natural springs both on and off the Reservation. The Tribe's Narrative Report emphasizes the cultural importance of springs to the Northern Cheyenne. The Cheyenne believe that springs are living beings with spirits. Narrative Report at 7-12. Failure to protect culturally important springs on and near the Reservation from the effects of groundwater drawdown will result in irreversible cultural and spiritual impacts to the Northern Cheyenne Tribe.

The mitigation measures proposed in the 2003 FEIS, including the two-mile buffer proposed in Alternative B, were not intended to prevent impacts to the Reservation's groundwater resources. Instead, the FEIS assumed that adverse impacts will occur to the Reservation's groundwater resources and proposed that CBM operators will somehow compensate for these impacts after the fact by "replacing" water lost from groundwater wells. 2003 FEIS at 4-70. The FEIS does not suggest what water sources would be used to replace Reservation groundwater or what financial assurances would be in place to ensure that CBM producers would actually pay for development of alternative water supplies. Such "mitigation" measures are not adequate to fulfill BLM's obligation to protect the Tribe's trust assets.

The district court's February 25, 2005 Order identified the discussion of well water mitigation agreements as an inadequacy in the FEIS. Mitigation based on "replacing" lost groundwater does not adequately protect the Tribe's existing and future uses of its water resources. The cultural and spiritual value of natural springs can never be "replaced." Furthermore, there will inevitably be time lags and uncertainties between the detection of impacts and the development of alternative water sources. During this time, entire communities may be without water. Additionally, the loss of *in-situ* groundwater resources will compromise the Tribe's ability to make more intensive use of its water resources to meet its existing needs and provide for future economic development, including potential development of its coal reserves. Narrative Report at 6-40. It is uncertain whether replacement water is available to meet existing demands, much less the demands posed by future economic development projects.

The Tribe asks BLM to consider a phased development alternative that would better protect the Tribe's water resources from drawdown. The alternative should include a buffer zone of at least four to five miles around the exterior boundaries of the reservation. This is the minimum necessary to assure that Reservation groundwater resources are not adversely affected by off-Reservation CBM development. According to the FEIS, three dimensional modeling of the East Fork of Hanging Woman Creek indicates that 20 feet of drawdown in the coal seams would extend 4 to 5 miles from a producing field. These effects of CBM development on groundwater could also result in drying up of springs fed by methane producing coal seams within this area.

CBM development should only be allowed within the buffer zone, if three-dimensional modeling specific to the hydrology of the area clearly and convincingly demonstrates that development can proceed without any impacts to Reservation aquifers. Any decision to proceed with drilling within the buffer zone must be made in consultation with the Tribe and consider the

likely cumulative impacts from State-authorized production of CBM resources associated with State and private lands. Authorization of federal CBM production within the buffer zone will begin with those tracts farthest from the Reservation which have the least potential to affect Reservation groundwater resources.

After commencement of production, monitoring of groundwater will be expanded to verify that CBM production does not result in any drawdown of Reservation groundwater, all in consultation with the Tribe. Further details on the monitoring measures necessary to protect Reservation groundwater can be found on pages 5 and 6 of the Tribe's August 2002 Mitigation Plan.

E. Methane Drainage.

According to the FEIS, CBM production in the vicinity of the Reservation could drain the Reservation's own CBM resources:

> CBM development would threaten to drain methane resources under tribal lands in the planning area. . . . Modeling by the MBMG suggests that the hydrostatic head of a producing coal seam could be reduced sufficiently to cause methane liberation at a distance of approximately 2 miles from the edge of a producing CBM field.

2003 FEIS at 4-70.

Financial compensation for lost Reservation CBM resources is not an adequate remedy for drainage of CBM resources especially if the Tribe does not want to develop its resources. Furthermore, there may be substantial uncertainties about: the availability of such compensation; how it would be calculated; the extent to which it would also redress accompanying damage to other Tribal resources; and the commitment and capability to adequately monitor the drainage and accompanying damage to other Reservation resources and values. BLM should evaluate a phased development alternative that incorporates a buffer zone of sufficient size to prevent loss of Tribal methane resources. The four to five mile buffer zone necessary to address impacts to Reservation groundwater should be sufficient, however this question should be evaluated in more detail in the SEIS.

F. Wildlife Resources.

Populations of big game animals whose range includes the Northern Cheyenne Reservation should be considered trust resources even during seasons when these animals are found off the Reservation. The Tribe's Narrative Report discusses the economic importance of wildlife resources to the Northern Cheyenne. A survey conducted on the Reservation found that 84 percent of Tribal members hunt on the Reservation, while 30 percent hunt off the Reservation. Animals hunted include deer, elk, bear, bobcat, and coyotes as well as smaller game. Birds hunted include sage hen, grouse, quail, turkeys, and prairie chickens. Deer were the

most commonly sought big game and pheasants the most commonly sought bird. Narrative Report at 3-38.

The 2003 FEIS concludes that "virtually every wildlife species that occurs within CBM development areas would be impacted to some degree" by CBM development, including big game animals such as deer, elk and antelope. See 2003 FEIS at 4-172. Notably, the FEIS forecast significant impacts to wildlife even under Alternative B, an alternative that was purportedly designed to "emphasize[]" protection of wildlife resources. The FEIS concludes that full-field CBM development near the borders of the Reservation would disrupt migratory pathways of some wildlife, and result in impacts from vehicular traffic, hunting and noise. Id. at 4-175. However, the FEIS contains no analysis whatsoever of the effects these impacts would have on the abundance of wildlife that Tribal members rely upon for subsistence use.

BLM should more thoroughly consider and protect wildlife resources (both on and off-Reservation) from the adverse effects of CBM development. BLM should conduct a wildlife study which assesses the likely impact of CBM development on regional wildlife populations that Tribal members depend upon as subsistence resources, and evaluates measures, such as establishing buffer zones and wildlife refuges to protect critical habitat, that will prevent and avoid significant impacts to these wildlife populations. BLM should thzen incorporate these measures in one or more of the phased development alternatives to be considered in the SEIS.

G. Cultural Resources.

While protection of unidentified cultural resources may occur when BLM permits site-specific CBM development projects, measures to protect traditional cultural properties (TCPs) already known to be of special importance to the Tribe should be addressed in a phased development alternative for the RMP. The Tribe proposes that buffer zones in which no CBM development would be allowed should be considered around the following sites:

1. Rosebud Battlefield and Wolf Mountains Battlefield sites. The Rosebud Battlefield is partially encompassed by Rosebud Battlefield State Park and was the site where the Northern Cheyenne and Lakota Sioux repelled an advance by army troops led by Brigadier General George Crook and forced the troops to withdraw back to Wyoming, effectively removing them from the principal war zone a week before the Battle of Little Bighorn. Both of these sites have been identified by the National Park Service (NPS) as eligible for National Historic Landmark (NHL) status. A copy of the NPS theme study evaluating these sites for NHL status is enclosed, along with the NHL applications for these sites.

2. Northern Cheyenne Homesteads. As discussed in the Tribe's Narrative Report, early Northern Cheyenne homesteads east of the Tongue River have ongoing cultural and historical significance to the Tribe. They are associated with a pivotal event in Northern Cheyenne history (establishment of the Tongue River Reservation). Further, they may be important due to their association with important individuals in Northern Cheyenne history.